

# इंटरनेट

# मानक

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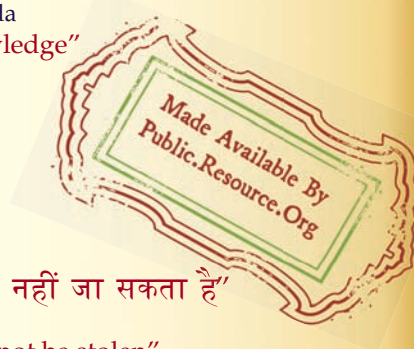
IS 3290 (1994): Household sewing machines - Thread take-up lever sub-assembly for cam type sewing machines [MED 29: Sewing Machines]



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के लिये थ्रेड टेक अप लीवर उप-समुच्चय — विशिष्ट

( तीसरा पुनरीक्षण )

*Indian Standard*

HOUSEHOLD SEWING MACHINES —  
THREAD TAKE-UP LEVER SUB-ASSEMBLY  
FOR CAM TYPE SEWING MACHINES —  
SPECIFICATION

( *Third Revision* )

UDC 687.053.1

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BUREAU OF INDIAN STANDARDS  
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NEW DELHI 110002

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Price Group 2

## FOREWORD

This Indian Standard (Third Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Sewing Machines Sectional Committee had been approved by the Light Mechanical Engineering Division Council.

This standard was first published in 1965 and subsequently revised in 1969 and 1981. The main modifications in the present revision are:

1. Hardness values have been revised to be consistent with the material used.
2. Dimensions have been upgraded to be in line with correct practices.
3. Standard has been upgraded for achieving better production and assembly control.

This standard is one of series of standards prepared to rationalize the types and sizes of sewing machine components for manufacturing in economic quantities.

While preparing this standard, assistance has been derived from JIS B 9035 : 1963 'Thread take-up lever of sewing machine for home use', issued by the Japanese Industrial Standards.

For general requirements IS 1610 : 1989 'Household sewing machines — General requirements' can be referred.

A list of Indian Standards on sewing machine and the components is given in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

# Indian Standard

## HOUSEHOLD SEWING MACHINES — THREAD TAKE-UP LEVER SUB-ASSEMBLY FOR CAM TYPE SEWING MACHINES — SPECIFICATION ( Third Revision )

### 1 SCOPE

This standard covers the requirements for thread take-up lever sub-assembly for cam type sewing machines for household purposes.

IS No.

1570 (Part 2/  
Sec 1) : 1979

Title

Schedules for wrought steels  
Part 2 Carbon steels (unalloyed  
steels), Section 1 wrought  
products (other than wire)  
with specified chemical composition  
and related properties  
(first revision)

### 2 REFERENCES

The following Indian Standards are necessary adjuncts to this standard:

IS No.	Title
513 : 1994	Cold rolled low carbon steel sheets and strips — Specification (fourth revision)
1068 : 1993	Electroplated coatings of nickel plus chromium and copper plus nickel plus chromium (third revision)
1079 : 1994	Hot rolled carbon steel sheets and strips — Specification (fifth revision)

### 3 NOMENCLATURE

The nomenclature of the thread take-up lever sub-assembly shall be as indicated in Fig. 1.

### 4 TYPES

Type A Sub-Assembly — With offset lever  
(see also 7.1).

Type B Sub-Assembly — With straight lever  
(see also 7.1).

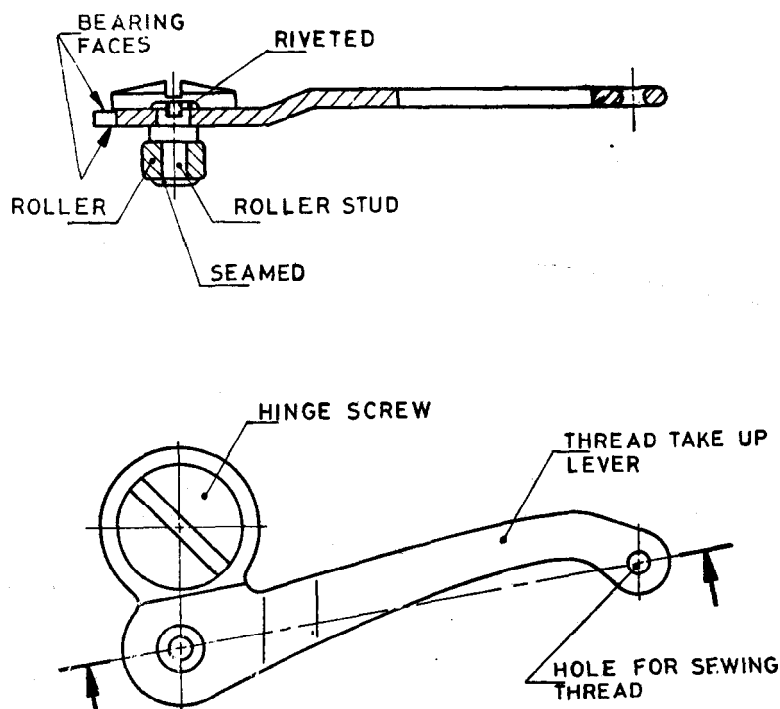


FIG. 1 NOMENCLATURE FOR THREAD TAKE-UP LEVER SUB-ASSEMBLY

5 MATERIAL

5.1 Lever

The thread take-up lever shall be manufactured from sheet or strip of any suitable steel which can be suitably hardened or any equivalent steel which is wear resistant (*see* IS 513 : 1994 and IS 1079 : 1994 ).

5.2 Hinge Screw and Roller

The hinge screw and roller shall be manufactured from any suitable steel which after suitable heat treatment fulfils the requirement for wear resistance.

5.3 Roller Stud

Roller stud shall be manufactured from any suitable steel, such as C 10 of Table 1 of IS 1570 ( Part 2/Sec 1 ) : 1979.

6 HARDNESS

6.1 The thread take-up lever shall have a minimum hardness of 350 HV around the hole for the sewing thread and bearing surfaces.

6.2 The hinge screw shall have a minimum hardness of 300 HV and the threaded portion shall be kept soft to avoid breakage during rigid tightening.

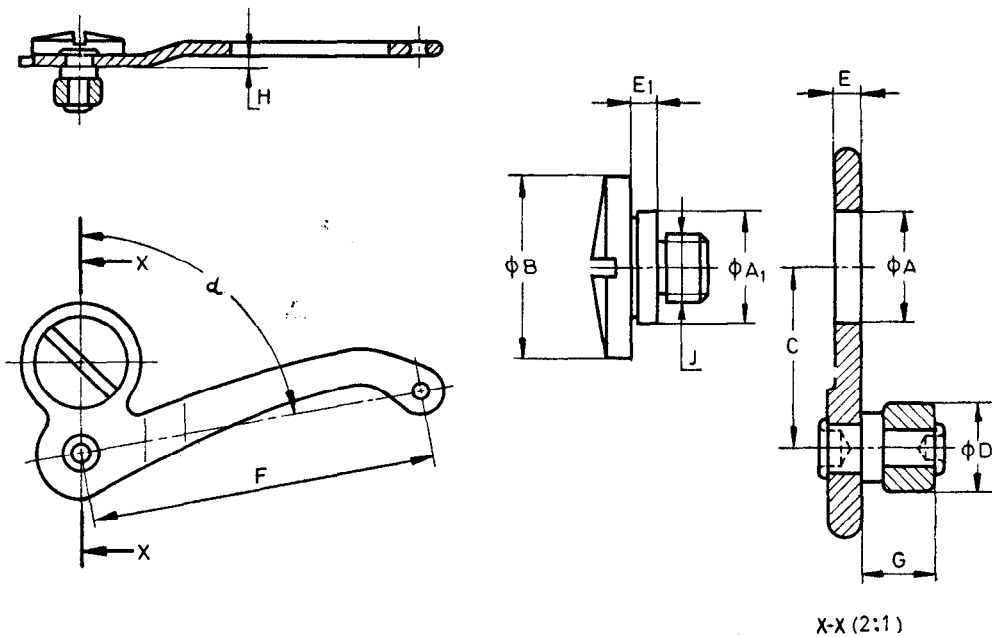
6.3 The roller shall have minimum hardness of 450 HV.

7 DIMENSIONS

7.1 The main dimensions of thread take-up lever sub-assembly shall be as given in Table 1.

7.2 The centre distance between axis of hole for screw and roller may be measured indirectly by

Table 1 Dimensions of Thread Take-up Lever Sub-assembly  
( Clause 7.1 )



All dimensions in millimetres.

STD	A	A <sub>1</sub>	B	C	D	E	E <sub>1</sub>	F	G	H	J	$\alpha$
Type A	9.544 9.525	9.531 9.513	16.06 15.94	15.90 15.80	7.940 7.931	2.242 2.230	2.261 2.248	61.03 60.98	6.54 6.46	2.02 1.97	M6	80°
Type B	10.180 10.167	10.172 10.160	16.00 15.75	15.69 15.59	7.935 7.927	2.235 2.225	2.255 2.235	63.40 63.35	7.10 7.02	Nil	M6	83°

measuring the clearance between outside of the fixture and the roller as shown in Fig. 2.

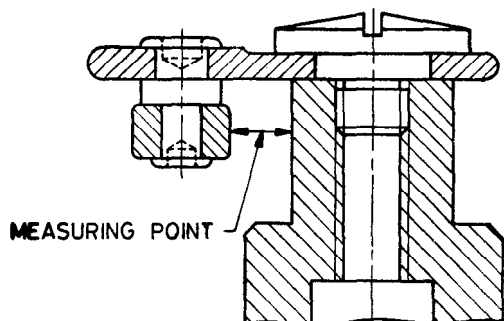


FIG. 2 METHOD OF MEASUREMENT OF CENTRE DISTANCE BETWEEN AXIS OF HOLE FOR SCREW AND ROLLER ( DIMENSIONS C )

## 8 TOLERANCES

8.1 The total indicator reading of the external sliding face of the roller when rotated about roller stud shall not exceed 0.01 mm.

8.2 The clearance in axial direction between roller and roller stud shall not exceed 0.1 mm.

8.3 The threaded diameter of hinge screw shall be concentric with the bearing diameter of hinge screw within 0.05 mm.

8.4 The squareness of roller with reference to the thread take-up lever shall not exceed 0.5 mm per 100 mm.

8.5 Out of roundness of roller shall not exceed 0.005 mm.

8.6 The error in parallelism of two bearing faces shall be within 0.008 mm.

8.7 The hinge screw hole shall be square with reference to the bearing faces within 0.005 mm per 10 mm.

8.8 The error in squareness of the bearing face of the hinge screw with reference to the centre line of screw shall be within 0.005 mm per 10 mm.

## 9 WORKMANSHIP, FINISH AND MANUFACTURE

9.1 The roller stud shall be firmly rivetted to the thread take-up lever and the roller shall rotate freely over roller stud without axial play.

9.2 The hole for the sewing thread in the thread take-up lever shall be countersunk and polished so that the thread passes through the thread hole smoothly and freely.

9.3 All parts shall be free from burrs, sharp edges, rust and cracks and shall be well finished.

The thread take-up lever shall be nickel-chrome plated conforming to at least Service Grade No. 1 with Designation Fe/Ni10b Cr of IS 1068 : 1993.

The thickness of coating shall not be less than 0.010 mm. The coating shall be free from flaws, unevenness, cracks, stains and other defects.

9.4 Hinge screw shall be properly fitted to the hold on thread take-up lever and lever shall oscillate smoothly such that there shall be no side play/tilting.

## 10 MARKING

10.1 The thread take-up lever shall be permanently marked with the following:

- a) Name or source of manufacture, and
- b) Type.

### 10.2 BIS Certification Marking

The product may also be marked with the Standard Mark.

10.2.1 The use of the Standard Mark is governed by the provisions of Bureau of Indian Standards Act, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

## 11 PACKING

11.1 Each thread take-up lever sub-assembly shall be wrapped in 400 G LDPE or equivalent bag after giving a suitable antirust coating and then packed in paperboard carton in accordance with the best prevalent trade practice.

11.2 Each packing box shall bear the manufacturer's name, trade-mark and description of contents.



# ANNEX A

## ( Foreword )

### LIST OF INDIAN STANDARDS ON SEWING MACHINES

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
1294 : 1989	Bobbins for sewing machines for household purposes ( <i>third revision</i> )	7491 : 1989	Sewing machines, household — Accuracy requirements ( <i>first revision</i> )
1295 : 1990	Household sewing machines— Needle bar — Specification ( <i>second revision</i> )	7492 : 1989	Sewing machines, household — Sewing requirements ( <i>first revision</i> )
1296 : 1989	Household sewing machines — Presser foot — Specification ( <i>third revision</i> )	7493 : 1989	Sewing machines, household — Durability requirements ( <i>first revision</i> )
1297 : 1991	Household sewing machines — Presser bar — Specification ( <i>third revision</i> )	8892 : 1978	Bobbins for sewing machines with rotating hooks for industrial use
1610 : 1989	Household sewing machines — General requirements ( <i>second revision</i> )	9152 : 1979	Glossary of terms and identification symbols relating to classification of industrial sewing machines
2181 : 1973	Household sewing machine needles ( <i>first revision</i> )	9697 : 1980	Bobbin cases for sewing machines with rotating hooks for industrial use
3290 : 1994	Household sewing machines — Thread take-up lever sub-assembly for camtype sewing machines — Specification ( <i>third revision</i> )	9874 : 1981	Arm and bed assembly for sewing machines for household purposes
3291 : 1968	Thread take-up cams for sewing machines for household purposes ( <i>first revision</i> )	10040 : 1981	Rotating hooks for sewing machines for industrial use
3299 : 1969	Oscillating-rock shafts for sewing machines for household purposes ( <i>first revision</i> )	10304 : 1982	Feed rock shaft for sewing machines for household purposes
3375 : 1991	Household sewing machines — Bobbin case — Specification	10305 : 1982	Feed rock shaft crank for sewing machine for household purposes
3816 : 1966	Connecting rods for sewing machines for household purposes	10306 : 1982	Feed lifting rock shaft for sewing machines for household purposes
3817 : 1991	Household sewing machines — Arm shaft — Specification ( <i>first revision</i> )	11280 : 1985	Feed bar for sewing machines for household purposes
3868 : 1966	Feed lifting rock shaft for sewing machines for household purposes	11345 : 1985	Oscillating shaft crank for sewing machines for household purposes
4181 : 1967	Feed fork for sewing machines for household purposes	11347 : 1985	Shuttle driver for sewing machines for household purposes
4188 : 1967	Oscillating shafts for sewing machines for household purposes	12058 : 1987	Slide plates for sewing machines for household purposes
4338 : 1991	Household sewing machines — Vertical oscillating shuttle — Specification ( <i>second revision</i> )	12109 : 1987	General requirements for light duty sewing machine heads for industrial use
4339 : 1967	Needle bar link studs for sewing machines for household purposes	12740 : 1989	Household sewing machines — Stand — Specification
4340 : 1967	Needle bar links for sewing machines for household purposes	12789 : 1989	Household sewing machines — Tables and base
4341 : 1967	Feed holder roller for sewing machines for household purposes	12798 : 1989	Household sewing machines — Fly wheels — Specification
4342 : 1967	Square slider for oscillating rock shaft for sewing machines for household purposes	13120 : 1991	Household sewing machines — Flywheel bush — Specification
4632 : 1968	Square slider for stitch regulator shaft for sewing machines for household purposes	13192 : 1991	Household sewing machines — Hand attachment assembly
4735 : 1968	Arm shaft cams for sewing machines for household purposes	13806 : 1993	Household sewing machine — Closed type shuttle race assembly — Specification
5740 : 1970	Memorandum of screw threads for sewing machine components	13825 : 1993	Household sewing machines — Arm shaft front bush — Specification
6903 : 1973	Glossary of terms relating to sewing machines for household purposes	13872 : 1993	Household sewing machine — Stitch regulators—Specification
		13972 : 1994	Household sewing machines — Bobbin winder assembly — Specification
		14207 : 1994	Household sewing machines — Open type shuttle race sub-assembly — Specification

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Indian Standards are reviewed periodically and revised, when necessary and amendments, if any, are issued from time to time. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition.

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